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AUTHOR Passmore, David Lynn
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ABSTRACT

About 2.7 of every 10 16- through 24-year-olds unemployed during March, 1979, were discharged from their last jobs. Regression analysis of data from the March, 1979, Current Population Survey revealed that 16- and 17 year-olds were more than twice as likely as 20- through 24-year-olds to have lost their last job; veterans were about 1.5 times as likely as non-veterans to have been job losers. Gender, race, marital status, and educational attainment were related only slightly to job loss. As long as it is believed or known that job loss among teenagers and young adults has negative consequences for individuals and society, then several alternative plans can be listed for reducing the incident of job loss. First, teenagers and young adults can be encouraged to prepare for and to seek employment in industries and occupations that provide stable employment in spite of economic fluctuations. Second, technical, communications, and personal/social skills of teenagers and young adults can be improved on the condition that job loss among youth is caused, for the most part, by their skill deficits and not by the condition of the economy. (Author/KC)

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David Lynn Passmore
The Pennsylvania State University

Paper Presented at the Annual Meeting of the
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Chances of Job Loss Among Teenagers and Young Adults: Implications for Vocational Education and Training

David Lynn Passmore

and

Borden M. Emshoff

The Pennsylvania State University

Passmore is Associate Professor of Vocational Education and Associate of the Center for the Study of Higher Education at The Pennsylvania State University, University Park, PA. Emshoff is a graduate assistant and doctoral student in the Division of Occupational and Vocational Studies at Penn State. The assistance of Bruce Huan, Penn State Computation Center consultant, and of Clifford Clogg and Mu Chian, Penn State Population Issues Research Center, is acknowledged gratefully. Data analyzed in this article were provided by the Inter-University Consortium for Political and Social Research. The production of this article was supported by grant, "Barriers to Youth Employment," from the Pennsylvania Research Coordinating Unit for Vocational Education, but the opinions and conclusions stated in this article are not necessarily those of the funding agency.

Running Head: Job Loss

Chances of Job Loss Among Teenagers and Young Adults: Implications for Vocational Education and Training

Examined in this paper is the relationship between the chances of job loss and the personal characteristics of teenagers and young adults in the civilian, noninstitutional population of the United States during March 1979. This information was derived from analysis of 1898 records in the 1979 Annual Demographic File prepared from the March 1979 Current Population Survey (CPS) by the U. S. Bureau of the Census. Briefly, 16- and 17-year olds were found to be roughly twice as likely as 20- through 24-year olds to describe job loss as their reason for unemployment; veterans were about 1.5 times more likely than non-veterans. Gender, race, marital status, educational attainment, and being 18 or 19 years old rather than 20 through 24 years old were related, by themselves, only slightly to whether youths were unemployed due to job loss. These relationships were estimated by fitting a binomial logistic regression of these personal characteristics on a dummy criterion variable indicating whether youths described job loss, rather than any other factor, as the reason for their unemployment during March 1979.

To place the research reported in this paper into context, a brief description of youth unemployment experience in the United States, along with a discussion of the importance for planners and developers of education for work of understanding correlates of youth job loss, is contained in the next section of this paper. Then, data used to consider the research problem are described, followed by a statement of the methods of analysis applied to these data. After the results of this data analysis are displayed, implications of this analysis are listed for planning and developing education for work and for additional research. Last, a summary is provided, and references are cited.

Background

Unemployment rates among teenagers and young adults have been persistently higher than those of adults. Bowers (1979, Table 1) compared the unemployment rates of these age groups in 1955, 1965, and 1973. The overall unemployment rate was approximately the same during these years, minimizing the influence of the business cycle on these comparisons. The incidence of unemployment during these years was highest among teenagers between 16- and 19-years old,

followed by young adults between 20 and 24 years old, with the lowest rates for adults over 24 years old. Among teenagers, 16- and 17-year olds and nonwhites have exhibited higher unemployment rates than 18- and 19-year olds and whites. And, over the years Bowers compared, racial and age differentials in unemployment widened. In addition, youth labor markets have been more sensitive to changes in economic conditions than have been job markets for adult males (Bednarzik & Klein, 1977, p. 4).

Reasons given by teenagers and young adults for their unemployment vary. Based on unpublished CPS data for March 1979,[1/] about 27 of every 100 of the 2.8 million unemployed 16- through 24-year olds lost their last job. Fifteen of every 100 quit their last job. About ten of every 100 teenagers and young adults were looking for work because they left school. About 23 of every 100 were classified as unemployed because they were seeking temporary work. Another 25 of every 100 young job seekers' reasons for their unemployment in March 1979 could not be coded.

Over the last decade, job loss has been the chief factor behind the unemployment of adult men and, along with labor force reentry, of adult women (U. S. Department of Labor, 1979, Table A-27). Gilroy and McIntyre (1975) found job loss to have been the reason for unemployment most influenced by cyclical fluctuations in the economy. The proportion of the total unemployed citing job loss as a reason for unemployment increased over 1979 from 41 to 45 percent; during the 1974-75 recession, that proportion rose as high as 57 percent (Leon & Rones, 1980, Table 4).

The recent focus of considerable activity among employment and training specialists and vocational educators has been on the planning and development of curricula and instructional systems designed to smooth the transition of youth from school to work roles (see, for instance, the large quantity and range of materials compiled by Wircenski, Passmore, Emshoff, Ay, & Kulahci, Note 1). Much of this planning and development activity seems to have been based on the assumption that deficiencies of personal/social skills and attitudes toward work among youth are major obstacles to finding and keeping a job (see Beach & Gideon, 1981, for a rationale for this position). Without challenging the assertion that the personal pathologies of youth are major reasons for their labor market difficulties (Bowles & Gintis, 1976, presented a different view), the research reported in this paper was designed to examine the

personal correlates of one portion of these school-to-work transition problems--job loss. An understanding of these correlates should help in focusing planning and development efforts on demographic groups most likely to be unemployed due to job loss.

Method

Data

Data examined in this study were generated through the March 1979 CPS. The CPS is a monthly household sample survey conducted by the U. S. Bureau of the Census to provide estimates of the size and distribution of employment, unemployment, and other characteristics of the civilian, noninstitutional population of the United States. About 56,000 households were selected and surveyed for the March 1979 CPS, producing data on over 120,000 persons who were 16 years of age or older. March 1979 CPS data from 1898 unemployed 16- through 24-year olds were selected from the 1979 Annual Demographic File (see U. S. Department of Commerce, Note 2) for research reported in this paper. A detailed technical description of the CPS sampling frame and methods, data collection and processing, and population estimation was provided by the U. S. Department of Commerce (1978). The Annual Demographic File is available for use by interested researchers through the U. S. Bureau of the Census, Customer Products Division, as well as through a variety of commercial vendors. The data extracted from the Annual Demographic File for this study can be obtained from the authors on a requestor-provided magnetic tape.

The March 1979 CPS sample contained 505 teenagers and young adults who ended their previous employment involuntarily and immediately began looking for work. The 1393 remaining unemployed 16- through 24-year olds reported that they voluntarily left their last job, were entering or reentering the labor force, or were trying to find temporary work only. The research reported in this paper attempted to determine the distinguishing personal features of these 505 job losers, compared to the 1393 persons who were unemployed for other reasons.[2/]

Job loss could have been due to discharge ("firing") or layoff from a previous job, although, unfortunately, this distinction could not be made from the CPS data. Also, the full extent of job loss in the youth population is underestimated by these data for at least two reasons. First, if another job was found shortly after a job was lost, then the CPS sample member was counted as employed rather than unemployed. Second, if no attempt was made to find a

new job, then the CPS sample member was classified as out of the labor force and not as unemployed. This pattern of flows between labor force states, especially between categories of unemployment and out of the labor force, is observed frequently (Clark & Summers, 1979) among youth.

Analysis

The probability of job loss was estimated using a binomial logistic function, as shown in equation 3.1 in Walker and Duncan (1967), to regress gender, race, age, veteran status, and educational attainment on a dummy criterion variable indicating whether youths described job loss, rather than any other factor, for their unemployment during March 1979 (see Harrell, 1980, for documentation of a computing routine for this type of regression). The logistic specification restricts the estimated probabilities of job loss to range between zero and positive one. Ordinary least squares regression on a nominally-scaled criterion variable can produce estimated values outside this range, and, because such a qualitative variable is not distributed normally, will not be fully efficient in a statistical sense (Theil, 1971).

Gender entered the statistical model as a dummy variate (if male, or not) as did race (if caucasian, or not), marital status (if ever married, or not), and veteran status (if ever served in armed forces, or not). To determine the unique patterns of job loss among teenagers and young adults, two dummy variates were specified to account for age: one variate indicated whether a CPS sample member was 16 or 17 years old; another variate indicated whether a sample member was 18 or 19 years old. The reference group for these two age variates was the 20- through 24-year old category. Educational attainment entered the model as integer years of schooling completed. The only years of schooling counted were those spent in graded public, private, or parochial elementary and high schools, colleges and universities, and professional schools, whether day schools or night schools. The criterion variable and variates were measured through face-to-face or telephone interviews with a responsible member of each CPS sample household (see Borus, Mott, & Nestel, 1978, for a discussion of possible response errors embodied in this choice of respondent; see also U. S. Department of Commerce, 1968, and U. S. Department of Labor, 1976, p. 11, for discussion and estimation of errors and biases in these interview data).

Coefficients for each variate in the binomial logistic function fit to these data are reported and interpreted in the next section of this paper.

Findings

Results are shown in Table 1 of regression of personal characteristics of unemployed 16- through 24-year olds on whether job loss was described as their reason for unemployment during March 1979. For the interested reader, footnotes to Table 1 document many technical details and intermediate results of this analysis. According to the raw data, about 2.7 of every 10 sample members were job losers; the average chance of job loss predicted through the statistical model used in this study about 2.4 out of 10. Therefore, the personal characteristics examined in this study underestimate slightly the chances of job loss as a reason for unemployment among teenagers and young adults.

Insert Table 1 About Here

Holding constant all variates in the statistical model at their mean values, 16 and 17 year olds were over twice as likely as 20- through 24-year olds to have job loss described as their reason for unemployment (computed by dividing the average predicted chances of job loss by the chances for the reference category of 20- through 24-year olds). Veterans were about 1.5 times more likely than non-veterans to be job losers. By themselves, gender, race, marital status, being 18 or 19 years old rather than 20 through 24 years, and educational attainment were related only slightly to job loss during the CPS reference period.

Discussion

Teenagers, 16 and 17 years old, not only have had the highest unemployment rates among youth, but also, as shown in Table 1, they were more likely to have been job losers in March 1979 than other unemployed youth between 18 and 24 years old. And, because of the sensitivity of job loss to economic fluctuations, the labor market for 16- and 17-year olds probably is among the most fickle for youth. Although strong racial differences in unemployment rates among youth have emerged since 1966, data analyzed in this study did not reveal meaningful differences in the chances of job loss by race. This provides, at least on actuarial basis, lack of compelling evidence for racial discrimination in discharges and layoffs of youth; of course, evidence of discrimination in individual cases is transparent in these data. Also, being married was related only slightly to the incidence of job loss, even though marital status has been a strong determinant of labor force participation (Bowen & Finegan, 1969; U. S. Department of Labor, 1979, Tables B-1 through B-5) and, for males, unemployment (U. S. Department of Labor, 1979, Table A-25).

At first glance, the inverse, though small, relationship between educational attainment and job loss shown in Table 1 may be contrary to expectations. However, educational attainment is related to employability. The proportion of the civilian labor force employed differed by about ten percent between high school graduates and dropouts over the period covering 1971-1977 (computed from U. S. Department of Labor, 1979, Table B-8). So, a lower likelihood exists that youths with lower than average educational attainment could have jobs to lose.

Although their representation in the March 1979 CPS sample is low (about 5 of every 100 sample members between 16 and 24 years), veterans were the second most likely demographic group to be unemployed due to job loss. The chances for job loss for veterans and for 16- and 17-year olds probably are not additive in any way because of the slight chances of a 16- or 17-year old being a veteran. In addition, different factors may be at the roots of veteran and teenage unemployment, requiring different approaches for treatment. Presidential initiatives through three programs--HIRE I (Help Through Industry Retraining and Employment Program), veteran participation in public service employment programs authorized under Titles II and IV of CETA, and the Disabled Veterans Outreach Program--reflected these different strategies under President Carter. However, at the time this paper is being written, these strategies are among the targets of budget cuts by the Reagan Administration.

What alternatives can be listed for treating the greater susceptibility of 16- and 17-year olds and veterans to job loss? One alternative is to do nothing because job loss may be inconsequential. Are job losers scarred from their discharges or layoffs by calling their lack of job stability to employers' attention or by decreasing crucial on-the-job training and socialization opportunities? Perhaps job loss is like a pesky rash on the wrist, not a symptom of any more serious disease nor a condition likely to erupt into a life threatening situation. The rash is a nuisance treated easily by patent salves. Job losers also have their "salves" in the form of unemployment compensation or union benefits. Similar positions have been taken by some analysts in the popular press, government, and academe when discussing the consequences of unemployment in general (see, for example, Buckley, 1977, or Friedman, 1975).

Or, if job loss is believed to, or can be established to, have negative consequences for individuals and society, then benign neglect of the problem would be inappropriate. Perhaps the industries and occupations from which jobs

have been lost by 16- and 17-year olds and veterans have been among the most vulnerable to economic downturns and upswings. An alternative would be to encourage job preparation and seeking in industries and occupations that are less vulnerable. Such an approach could have two prongs. First, educational planners and developers would need to identify and attempt to avoid these vulnerable elements of the labor market. Second, realistic information about the labor market and training outcomes would need to be disseminated to teenagers and young adults.

Other treatment alternatives could be derived from an analysis of the causes of job loss. Are most job losses due to layoffs, as the coincidential movement of the incidence of job loss with economic activity might suggest? Or, do most young people lose jobs because they are ill-prepared for the technical, communications, and personal/social demands of work? The arena for action against job loss due to economic conditions is in general policies formulated to promote economic stability. Perhaps vocational education and training programs could have the greatest effect on removing the skills deficits young people bring to work.

Data presented as a result of this study cannot parse job loss into its unique causes. However, micro-data files, such as those produced through the National Longitudinal Surveys of Labor Market Experience, the Longitudinal Study of Educational Effects (a.k.a., the National Longitudinal Survey of the High School Class of '72), or other special studies of youth labor market behavior, might be more suited to this research purpose. Also, studies relying on a longitudinal perspective might be able to describe the population of youthful job losers, which was restricted in this study to unemployed youth who lost their last job. Not accounted for were youth who lost their last jobs and who became employed immediately or dropped out of the work force.

Summary

About 2.7 of every 10 16- through 24-year olds unemployed during March 1979 were discharged from their last jobs. Regression analysis of data from the March 1979 Current Population Survey revealed that 16- and 17-year olds were over twice as likely as 20- through 24-year olds to have lost their last job; veterans were about 1.5 times as likely as non-veterans to have been job losers. Gender, race, marital status, and educational attainment were related only slightly to job loss. As long as it is believed or known that job loss among teenagers and young adults has negative consequences for individuals and

society, then several alternative plans can be listed for reducing the incidence of job loss. First, teenagers and young adults can be encouraged to prepare for and to seek employment in industries and occupations that provide stable employment in spite of economic fluctuations. Second, technical, communications, and personal/social skills of teenagers and young adults can be improved on the condition that job loss among youth is caused, for the most part, by their skill deficits and not by the condition of the economy.

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Footnotes

1/ Estimated by applying CPS sampling weights to data from unemployed 16- through 24-year olds in byte 42 of the "person" records in the 1979 Annual Demographic File.

2/ Unweighted data from the 1898 unemployed 16- through 24-year old CPS sample members were analyzed in this study. Ratio estimates of U. S. youth population figures can be constructed from CPS sample data by multiplying each sample member's data by a unique sampling weight provided in the Annual Demographic File. However, multivariate analysis of the resulting weighted data is difficult.

Table 1

Relationship Between Chances of Describing Job Loss as a Reason for Unemployment and Personal Characteristics of 16- Through 24-Year Olds in the Civilian Noninstitutional Population of the United States During March 1979

Characteristic	Sample Mean[a]	Unstandardized Coefficient[b], [c]	Chances of Job Loss Compared to Other Reasons[d]
Gender			0.06 out of 10 greater, if male
male	0.532	0.912*	
female	0.468	rc	
Race			0.14 out of 10 greater, if caucasian
caucasian	0.776	0.151	
non-caucasian	0.224	rc	
Marital Status			0.15 out of 10 less, if ever married
ever married	0.218	0.141	
never married	0.782	rc	
Veteran Status			0.77 out of 10 greater, if a veteran
veteran	0.054	-0.553*	
non-veteran	0.946	rc	
Age			1.23 out of 10 greater, if 16 or 17 rather than 20 to 24 years
16 or 17 years	0.253	-2.033*	
18 or 19 years	0.254	-0.594*	0.48 out of 10 greater, if 18 or 19 rather than 20 to 24 years
20 to 24 years	0.483	rc	
Educational Attainment	12.113	-0.084*	0.33 out of 10 less, if 10 years rather than mean
			0.27 out of 10 greater, if 14 years rather than mean

Source: Estimated from binomial logistic regression of data on reasons for unemployment given by 1898 teenagers and young adults in the 1979 Annual Demographic File assembled by the U. S. Bureau of the Census from the March 1979 Current Population Survey.

[a] Mean values for dummy variates are the proportions of sample members in categories.

[b] Estimated by solving for $\hat{\beta}_j$, as shown in section 4 of Walker and Duncan (1967), where, for person i, $P[\text{loss}]_i = [1 + e^{-\alpha + \sum_j (-X_{ij}\hat{\beta}_j)}]^{-1}$ and $\hat{\beta}_j$ is the unstandardized coefficient for variate j, $P[\text{loss}]_i$ is the probability of a job loss for person i, α is an intercept term, X_{ij} is the value on variate j for person i, and e is the base of natural logarithms.

Table 1 (Continued)

c/ The value of the intercept term is -0.039. The fit of the model to the data is indicated by a chi-square value of 1984.8, which, with 6 degrees of freedom, is well beyond conventional critical values. This chi-square value is twice the difference in the log likelihood for the model with all variables from the likelihood based on a model containing the intercept only (see Harrell, 1980, p. 83).

d/ Estimated through two major steps. First, the average probability of job loss, $\bar{P}$[loss], was computed by substituting computed standardized coefficients and mean values for all variates into the equation in footnote b. Then, to estimate the chances of job loss associated with each dummy variate, $\bar{P}$[loss] was computed again, but with the mean value for the reference category substituted for the particular variate under consideration. For example, $\bar{P}$[loss] was computed with the mean value for females on the gender variate, but with mean values for educational attainment and positive categories for each dummy variate. This allowed the difference in $\bar{P}$ [loss] to be stated, given a difference, in this case between males and females, on the variate. In the case of educational attainment, $\bar{P}$[loss] was computed for 10 and 14 years. Program code to conduct these operations is available from the authors for the TI-59 Programmable Calculator or, in PL/1, for the IBM 3033 computer under the MVS operating system.

*/ These coefficients at least twice as large as their standard errors.

rc = reference category.

Authors

DAVID LYNN PASSMORE, Associate Professor of Vocational Education and Associate of the Center for the Study of Higher Education, 114 Rackley Building, The Pennsylvania State University, University Park, PA, 16802. Specialization: Planning and evaluating education for work. AERA Division Memberships: D, G, and H.

BORDEN M. EMSHOFF, doctoral student in vocational-industrial education, 115 Rackley Building, The Pennsylvania State University, University Park, PA, 16802. Specializations: Industrial and military training.